



CMS PhEDEX/FTS2.0 pre-Integration activities

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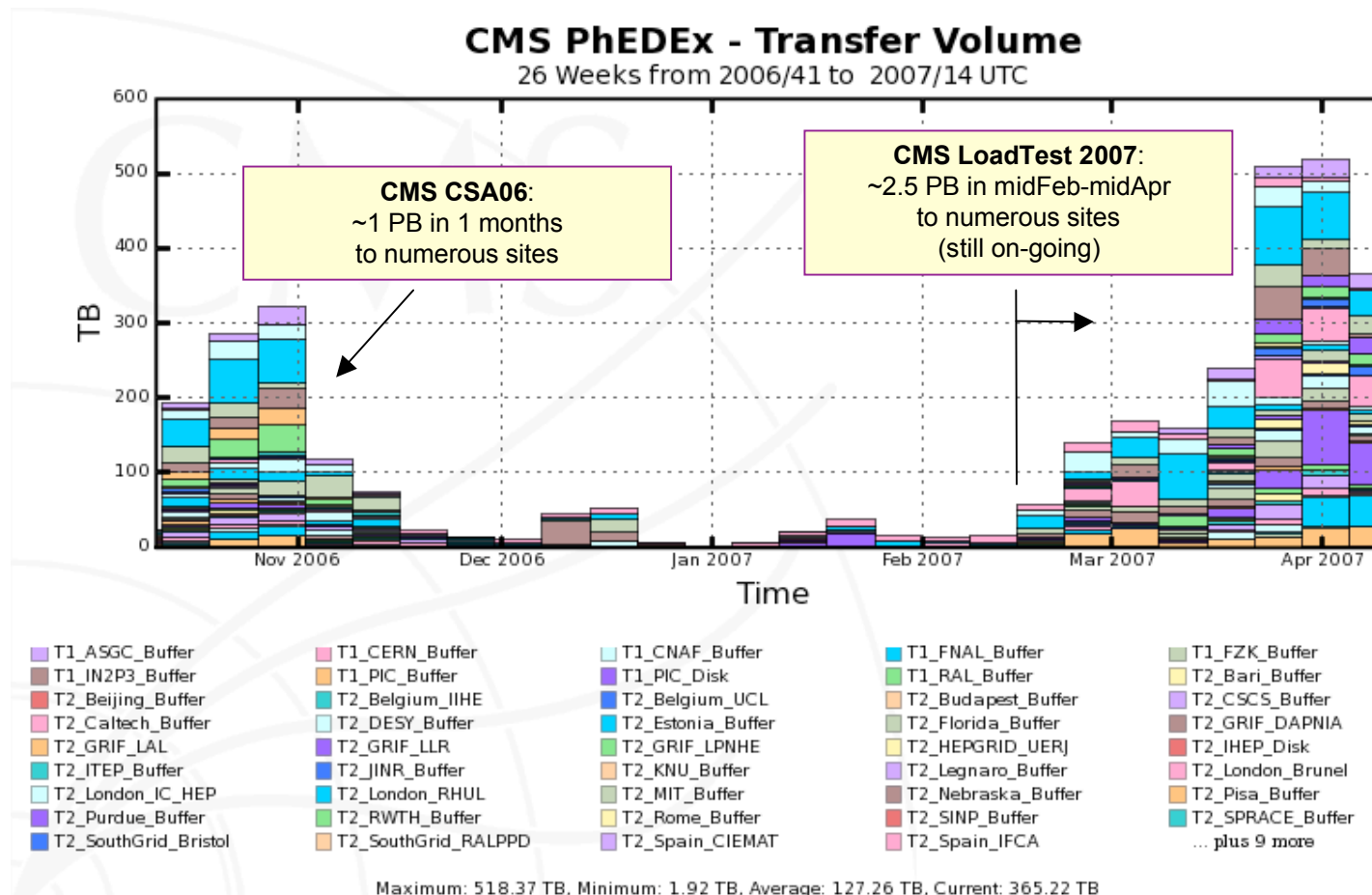
ECM

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The background

- PhEDEx fully integrated with FTS 1.5
 - ❑ in production use since ~Spring 06
 - ❑ LoadTest activities since Feb 07, also





FTS in PhEDEx



- **PhEDEx agnostic on file transfer mechanism**
 - ❑ A “tool” like g-u-c/srmcp or a service like FTS can be used
 - ❖ Naively, more refined stuff require more integration effort to profit of the advantages of such refinement

- **PhEDEx is now using FTS via a “ftscp”**
 - ❑ Keep it easy!
 - ❑ Perl glue script with (minimal) needed logic to deal with *glite-transfer-**

- **PhEDEx strategy for PhEDEx/FTS2.0 integration**
 - ❑ ... well, more details in full draft plan, but oversimplifying it:
 - ❖ Phase-A: c.I. tests, learn FTS state machine, think of the logic CMS needs
 - ❖ Phase-B: implement X and do PhEDEx-triggered FTS2 transfers
 - Depending on Phase-A, X can be either a ‘new’ ftscp, or a brand new FTS backend in PhEDEx



Phase-A tests



➤ Involved sites:

- ❑ CERN + 1 T1 site so far. CNAF volunteered.

➤ Test set-up

- ❑ 256 (2.6 GB each) LoadTest files used, on Castor@CERN, staged
- ❑ CERN FTS set-up:
 - ❖ FTS 2.0 server: pilot-fts-ws.cern.ch
 - ❖ FTS 1.5 client on CNAF UI
 - ❖ Route: CERN-INFN
- ❑ Destination storage: Castor-1 SRMv1 @CNAF

➤ Test operation

- ❑ 5 test rounds
- ❑ Test-1/2 to learn logic, test-3/4 partially unsuccessful due to storage issues at destination site, test-5 makes sense
 - ❖ >2 TB of test files transferred (conservative aggregate over 5 tests)
 - ❖ Test-5: 100% files transferred in ~3 hrs at ~87 MB/s (1 single ftsjob file; 10 files, 5 streams config used), PaoloB confirms ~9 Active all the time



Phase-A tests: outcome



➤ The tests tell CMS that:

- ❑ Change of server is ~transparent

- ❖ Statement limited due to the c.l. testing scope only

- ❑ No obvious functionality / performance issues encountered

- ❑ Needs time to familiarize with state machine

- ❖ Not satisfied yet by ftscp ability to deal with 'states' for single files in a ftsjob file

- Need to understand it more closely (just needs time..)

➤ The tests so far do **not** answer these questions:

- ❑ Is PhEDEx happy/ready to use this?

- ❖ Did not yet even start a rough test within PhEDEx

- storage issues at CNAF since end of test-5, could not extend to other sites in Phase-A

- ❑ What about other sites? What about urlcopy vs srmcopy?

- ❖ No time so far...

- ❑ Which is the best approach to follow within PhEDEx?

- ❖ New 'ftscp'? New full FTS backend developed in PhEDEx?

- PhEDEx people in the loop already, Simon/me identified a colleague from PIC keen and willing to help on this